

DESCRIPTION of an extraordinary Fish, resembling the *STYLEPHORUS* of Shaw. By S. L. MITCHILL, M. D. Read February 3, 1824.

THIS individual was presented to me by Captain Hector Coffin. It was taken during a voyage from Londonderry to New-York, in latitude  $52^{\circ}$  N. and longitude  $30^{\circ}$  W. It was discovered afloat about twenty yards from the vessel. A boat was hoisted out for the purpose of raising it. The creature was raised from the water without any resistance, and died in fifteen minutes after being brought on board.

When first seen, the belly was distended, as if blown up to the size of a quart decanter, or the crown of a hat. The stomach contained a fish ten inches long, which, from its sound state, appeared to have been recently swallowed. That fish was not preserved.

The length was six feet ; of which fourteen inches belonged to the body, or the space between the extremity of the upper lip beneath to the vent. The tail was flagelliform, or like the lash of a whip, and gradually tapered away in the course of fifty-eight inches to a point. Toward the end it was flexible enough to be tied into knots, after the manner of a string or a cord.

The specimen was a female ; and the colour a dusky brown, resembling that of a dark eel.

Its aspect, when raised from the jar of alcoholic spirit, in which it had been well preserved, was so strange and ambiguous, that, until I discovered gills, I could not satisfactorily decide that it was a fish. The roes were very distinct, the ovaries being large and full of eggs.

The pisciform character being settled, I endeavoured to determine the order to which it systematically belonged. Though the absence of ventral fins led to its classification among the Apodes, yet the want of opercles and branchial apertures, to-

gether with the presence of one slit on each side of the neck below for respiration, and a universal softness of the parts, fix its place among the *Cartilaginous*.

I proceed to a more particular description of its figure and dimensions.

The mouth had an enormous gape ; and the throat, for the space of six inches, was but a membranous bag. It was capacious enough to receive my hand without difficulty. The internal surface was black. There was no appearance of a tongue.

From the upper part of the mouth, or the spot where the upper maxillary bones unite, to the angle of the jaw, was three inches ; and from that angle to the tip of the lower jaw, three inches.

The symphysis of the chin had a very flexible joint, that was capable of opening or expanding from a most acute angle to a right line, or as nearly so as the curvature of the bones permitted. This construction, with a corresponding laxity of the jaws gave the mouth an extraordinary power of expansion. Yet, when the angles of the jaws are approximated, and the bones of the lower jaw brought to their parallelism, the mouth closes with exactness, and in that state gives no indication of the size to which it spreads when open.

The lower jaw was toothless ; but the upper jaw, for about an inch and a half, was furnished with a row of teeth, bony and hooked.

The eyes were situated about half an inch from the point of the upper jaw, one on each side, and looking forward. They were small, and did not exceed in diameter the sixteenth of an inch.

The head was smaller than is usual in fish. It would seem that its principal use was to give origin and insertion to the bones and muscles of the jaws. At its foremost point is a small knob or projection forward of the eyes ; and from it proceeded a sort of frænum sustaining the upper lip. From

this inconsiderable head proceeded the vertebral column, which in its progress to the tail gradually tapered away, and seemed to lose its bones and joints, and to be converted into a sort of tough and grisly appendage.

There was no appearance of ribs.

There were two gill-openings, one on each side of the neck below, resembling slits, about an inch and a half long. The gills themselves are situated within the duplicatures of the openings in three bundles or divisions, suspended by membranes and skin.

The skin was smooth and scaleless, and susceptible of being easily moved and pinched up, like that of some species of *Lophius*.

From the head a whitish line extended on each side of the back, as far as its bony constitution could be traced. Two similar stripes, one on each side, proceed from the vent backward to the tail, but they are less distinct, and disappeared sooner. Between the former is situated the dorsal fin; between the latter, the anal fin.

The dorsal fin begins about eleven inches from the tip of the upper jaw, and reaches like a fillet or narrow riband, quite to the tail, and at its extremity joined the anal.

The anal fin commenced just behind the vent, and was continued also quite to the tail, and there joined the dorsal.

The caudal fin was so faint or indistinct, that I have hardly thought it worthy of notice. I ought to remark, however, that several hair-like rays may be distinguished. The rays of these were very numerous, but it was impossible to count them.

Thus the dorsal and anal fins are united with each other, or are connected with the caudal.

The pectoral fins are situated immediately behind the gill openings. They are very small and feeble, of a squarish shape, and from one half to one quarter of an inch long.

They were of a fleshy consistence, and contained about thirty slender rays.

The distance from the mouth to the vent was fourteen inches. All the rest of the length, amounting to fifty-eight inches, tapered away gradually from an inch in depth almost to a point.

The stomach was ample and capacious ; the intestine direct and short ; the liver distinct and well-formed.

Filiform processes, or excrescences, about an inch in length, depended on each side of the whitish stripe all the way from the head down the back to the tail. The space between them is nearly an inch, so that they probably amounted to fifty pairs. These cirrhi, or threads, have no expansion or enlargement at their extremities.

The points of resemblance between this animal and the *Stylephorus* described by Shaw, may be easily gathered even from his bad description and worse figure. They are both furnished with the same curiously organized mouth, the same fins and elongated caudal process. The lateral line described above corresponds with the "double fibre" of Shaw, and they are both scaleless. In the *Stylephorus* the dorsal is described as not being continuous. He says, however, "I am not without my doubts whether it might not in the living animal have run quite to the tail, and whether the specimen might not have received injury in that part."

The colour of Shaw's fish is described as silvery, but those who are acquainted with the fugacious nature of metallic colours in this class of animals, are aware that nothing positive can be deduced from this accidental circumstance. The fact of their being captured in different latitudes, and the difference in their size, is of little importance.

The eyes of the *Stylephorus* are described as being large and pedunculated ; in the animal noticed above, they are small and sessile. Shaw examines carefully to find marks of a reticulated structure, but without success. The circumstance of

their standing on peduncles or footstalks is so much at variance with what occurs in other animals, that I should hesitate little in declaring their unusual form to have been the result of accident or disease.

As the generic name proposed by Shaw is probably derived from an accidental character, I venture to substitute for it the name of *Saccopharynx*, in allusion to the pouch-like form of its throat.

GENUS. SACCOPHARYNX.

*Jaws* capable of great dilatation.

*Throat* wide like a bag.

*Tail* flagelliform, tapering away to a point, and beset with many pairs of cirrhi.

*Dorsal, caudal, and anal fins* united:

Cabinet of Dr. Mitchill.

OBSERVATIONS and Experiments on the Seeds of the CERBERA THEVETIA. By I. B. RICORD MADIANNA, M. D.  
Read March 1, 1824.

PERSOON, in his *Synopsis Plantarum*, enumerates seven species of the genus *Cerbera*; and the only one which, until the present time, has been suspected of having deleterious properties, is the *Cerbera Ahovai*. Orfila, in his *Toxicologia*, mentions that the kernel of the fruit of *C. Ahovai* is very poisonous, and that the wood thrown into a pond stupifies the fish. He adds, that the fruit of *C. Manghas* has a sharp and bitter taste, and that its qualities are emetic. But this learned toxicologist makes no observations on the other species of *Cerbera*.

In October 1823, being at Guadaloupe, in the parish of Capes terre, I discovered the *C. Thevetia*. This shrub was